

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A system for purifying a flow of exhaust gases of diesel or gasoline multicylinder engines containing, on average, an excess of oxygen, and in which a mixing ratio of the engine is periodically adjusted from a lean mixing ratio to a more stoichiometric or rich mixing ratio with a λ value below 1.2, the system comprising a combination of three operational units including:

a NO_x adsorption catalyst;

a single an oxidation catalyst effective to promote oxidation of at least NO to NO₂; and,

a particle separator; and an NO_x adsorption catalyst,
wherein, in a flow direction of the exhaust gas, the NO_x adsorption catalyst is arranged before said oxidation catalyst or the NO_x adsorption catalyst is arranged in the same structure with the NO_x adsorption catalyst located upstream or at the same location as the sole oxidation catalyst of the three operational units, with respect to the flow of exhaust gases, whereby the system reduces the amounts of hydrocarbons, carbon monoxide, nitrogen oxides and particles present in the exhaust gas.

Claim 2 (Canceled).

3. (Currently Amended) The system of claim 1, wherein the order of the operational units, in flow direction of the exhaust gas, is as follows: the NO_x adsorption catalyst, the particle separator, and the oxidation catalyst effective to promote oxidation of at least NO to NO₂.

4. (Currently Amended) The system of claim 1, wherein the order of the operational units, in flow direction of the exhaust gas, is as follows: the NO_x adsorption catalyst, the oxidation catalyst effective to promote oxidation of at least NO to NO₂, and the particle separator.

5. (Currently Amended) The system of claim 1, further comprising an exhaust gas discharge line of for each cylinder of the engine, the exhaust gas discharge lines is connected to a connecting channel, wherein at least one unit of said combination of operational units are arranged in the exhaust gas discharge line and the connecting channel.

6. (Currently Amended) The system of claim 1, further comprising an exhaust gas discharge line for each cylinder of the engine, each of the exhaust gas discharge lines connected to a connecting channel, wherein the NO_x adsorption catalyst is arranged in an each exhaust gas discharge line of each cylinder of the engine, said discharge lines being connected to a connecting channel and wherein said oxidation catalyst effective to promote oxidation of at least NO to NO₂ and said particle separator are arranged in the connecting channel.

7. (Previously Presented) The system of claim 1, wherein the system includes two or more partial systems in parallel, each of the partial systems comprising said operational units.

8. (Currently Amended) The system of claim 1, wherein the NO_x adsorption catalyst and/or oxidation catalyst effective to promote oxidation of at least NO to NO₂ are disposed in the same structure with the particle separator.

9. (Currently Amended) The system of claim 1, wherein the oxidation catalyst effective to promote oxidation of at least NO to NO₂ contains platinum and/or palladium catalytic metal(s).

10. (Currently Amended) The system of claim 1, further comprising an exhaust gas discharge line for each cylinder of the engine or one exhaust gas discharge line for two cylinders of the engine, wherein the exhaust gases contain at least one of nitrates and particles and wherein the NO_x adsorption catalysts catalyst is arranged in each ~~an~~ exhaust gas discharge line of each cylinder, or in each of the ~~exhaust gas discharge lines of two cylinders~~.

11. (Currently Amended) The system of claim 10, wherein the system NO_x adsorption catalyst is capable of the regeneration of NO_x adsorption catalyst sulfates, and wherein, regeneration of the NOX adsorption catalyst, reduction of

nitrates, and burning of particles is accomplished by periodically adjusting the mixing ratio of the engine from using a lean mixture and to a rich mixture.

12. (Currently Amended) The system of claim 11, wherein a ratio defined by of a duration of between the lean mixture mixing ratio to duration of and the rich mixture mixing ratio is more than 3.

13. (Previously Presented) The system of claim 10, wherein said NO_x adsorption catalyst contains catalytic metal platinum and/or rhodium and at least one of the following elements: Ba, Sr, La, Y, Ce, Zr.

Claims 14 to 19 (Canceled).

20. (Previously Presented) The system of claim 12, wherein the ratio is more than 10.

21. (Currently Amended) The system of claim 13, wherein the NO_x adsorption catalyst further contains at least one of the following elements: Li, Na, K, Rb, Cg, Be, Mg, and Ca.

Claims 22 to 26 (Canceled).

27. (Previously Presented) The system of claim 1, wherein the NO_x adsorption catalyst and the particle separator are disposed at the same location.

28. (Currently Amended) The system of claim 1, wherein the oxidation catalyst effective to promote oxidation of at least NO to NO₂ and the particle separator are disposed at the same location.

29. (New) The system of claim 1, wherein the NO_x adsorption catalyst is a first operation unit of the combination of three operational units.

30. (New) The system of claim 1, wherein the oxidation catalyst is further effective to promote conversion of HC to H₂O and CO to CO₂.

31. (New) The system of claim 1, wherein the combination of three operational units are distributed in a first structure and a second structure, wherein the first structure is an exhaust gas discharge line from one cylinder of the engine and the second structure is a connecting channel downstream of the first structure in a direction of the flow of exhaust gases.

32. (New) The system of claim 1, wherein the combination of three operational units are distributed in a first structure and a second structure, wherein the first structure is an exhaust gas discharge line from a plurality of cylinders of the engine and the second structure is a connecting channel downstream of the first structure in a direction of the flow of exhaust gases.

33. (New) The system of claim 12, wherein the ratio is more than 10.